



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT
TO WITHDRAW GROUNDWATER
(FOR USE IN GROUNDWATER MANAGEMENT AREAS)

Permit Number: GW0003501
Effective Date: May 1, 2014
Expiration Date: April 30, 2024

Pursuant to Section 62.1-256 of the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) and the Ground Water Withdrawal Regulation (9VAC25-610-10 *et seq.*), the State Water Control Board hereby authorizes

Permittee Nestle Purina PetCare
Address 131 Tidy Cat Road
King William, VA 23086
Facility Nestle Purina PetCare – Golden Cat Division

to withdraw and use groundwater in accordance with this permit and the application received July 7, 2008 and subsequently amended.


The permittee is authorized to withdraw 31,499,600 gallons per year.

The permittee shall comply with all requirements contained on this cover page, Part I - Permit Standards, Limitations, and Conditions, Part II - Special Conditions, the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia), and the Groundwater Withdrawal Regulation (9VAC25-610-10 *et seq.*). Nothing in this permit or this regulation shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes and regulations.

The permitted withdrawal will be used to supply process water to the industrial facility for the manufacturing of cat litter products in accordance with the submitted application. Other beneficial uses are not authorized by this permit.

Any noncompliance with permit conditions, the Groundwater Withdrawal Regulation (9VAC25-610-10 *et seq.*) or the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) is a violation of the regulation and law, and is grounds for enforcement action, permit termination, revocation, amendment, or denial of a permit renewal application.

By direction of the State Water Control Board, this Permit is granted by:

Signed 

Date 4/29/14

For the State Water Control Board

Part I
Permit Standards, Limitations and Conditions

1. The withdrawal of groundwater shall originate from the following withdrawal points:

<u>Owner Well Name</u>	<u>DEQ Well #</u>	<u>Depth</u>	<u>Aquifer</u>	<u>Latitude</u>	<u>Longitude</u>
Well #1	150-00151	435'	Potomac	<u>37°43' 0.6"</u>	<u>77° 07' 21.8"</u>

2. Withdrawals from the well or well system are limited as follows:

In a calendar month: Total pumpage from these wells shall not exceed **2,620,800** gallons. The permittee shall report any amount in excess of the monthly withdrawal limit by the fifth day of the month following the month of over withdrawal.

3. Water use from each well and total system water use shall be recorded monthly and reported on forms provided by the Department of Environmental Quality (Department) to the Groundwater Withdrawal Permitting Program by the tenth day of each January, April, July and October for the respective previous standard quarter. Records of water use shall be maintained by the permittee as required in Section 9 VAC 25-610-130(F).
4. Permitted users shall install in-line totalizing flow meters to read gallons, cubic feet or cubic meters on each well prior to beginning the permitted use. Meters shall be tested in accordance with American Water Works Association (AWWA) Manual M-6, "Water Meters - Selection, Installation, Testing, and Maintenance". Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in groundwater withdrawal reports.
5. Each permitted well shall be equipped in a manner such that water levels can be measured during pumping and non-pumping periods without dismantling any equipment. Any opening for tape measurement of water levels shall have an inside diameter of 0.5 inches and be sealed by a removable plug or cap. The permittee shall provide a tap for taking raw water samples from each permitted well.
6. The permittee shall not place a pump or water intake device lower than the top of the uppermost confined aquifer that a well utilizes as a groundwater source or lower than the bottom of an unconfined aquifer that a well utilizes as a groundwater source.
7. Each well that is included in this groundwater withdrawal permit shall have affixed to the well casing, in a prominent place, a permanent well identification plate that records the Department's well identification number, the groundwater withdrawal permit number, the total depth of the well and the screened intervals in the well, at a minimum. Such well identification plates shall be in a format specified by the Department and are available from the Department.

8. The Water Conservation and Management Plan (Plan) as described in the application received July 7, 2008 and subsequently amended is incorporated into this permit and included as Attachment A. Requirements in the Water Conservation and Management Plan shall have the same effect as any condition contained in this permit and may be enforced as such. Records of activities conducted pursuant to the Plan are to be submitted to DEQ upon request.
9. This permit may be reopened for the purpose of amending the conditions of the permit to meet new regulatory standards duly adopted by the Board.
10. A new permit application must be submitted 270 days before the expiration date of this permit.
11. A new permit application must be submitted 270 days prior to any proposed modification to this permit that will result in an increase of withdrawal above permitted limits or violate the terms and conditions of this permit.
12. This permit may be reopened for amendment, transfer, or revocation as described in Part VI of the Ground Water Withdrawal Regulation (9 VAC 25-610-290 through 9 VAC 25-610-340).
13. The permittee must notify the Department in writing and obtain staff approval of any change in the status, construction or pump setting of wells included in this permit. A revised GW-2 form must be submitted to the Department within 30 days in the event that the physical construction of a well is altered or the pump setting in the well is changed.
14. The permittee must notify the Department in writing of any change of contact person, address, or phone number that is contained in the application received July 7, 2008.
15. Upon presentation of credentials the Board or Department, or any duly authorized agent, shall have the power to enter, at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, located anywhere in the Commonwealth for the purposes of obtaining information, conducting surveys or inspections, or inspecting wells and springs to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which the Board or Department may adopt, issue or establish to carry out the provisions of the Ground Water Management Act of 1992 and the Groundwater Withdrawal Regulation.

Part II
Special Conditions

1. The Mitigation Plan, as described in the application received July 8, 2008 and subsequently amended, is incorporated into this permit and included as Attachment B. Requirements in the Mitigation Plan and subsequent revisions shall have the same effect as any condition contained in this permit and may be enforced as such.
2. Withdrawals from individual wells are limited as follows: The withdrawal from the production well (DEQ# 150-00151) is permitted up to the 31,449,600 g/y and 2,620,800 g/m amounts only if/when the alternate water supply of reuse water from Hampton Roads Sanitation District (HRSD) is not available. Once this alternate supply is available, groundwater withdrawal is to be reduced by the amount of reuse water available. If the alternate water supply from HRSD is suspended for problems with the source availability, the production well (DEQ# 150-00151) is permitted to supply the needed plant water up to the permitted amounts until the alternate source is in place as required in Special Conditions #3 and #4 below.
3. The permit recognizes that the requirement to pursue alternate water supplies is being met by the HRSD re-use supply and that the permittee will be the only recipient of the re-use water until the reuse supply exceeds the permittee's water needs. If the HRSD alternate water supply is suspended for over 90 days or issues arise that will cause this water supply to become unavailable to support the plant, or be significantly reduced, an alternate source must be obtained to at least supplement (reduce) the needed groundwater withdrawal. The permittee shall notify the Department of any indication of problems with the HRSD supply within 5 days of the occurrence and submit plans to address any non-temporary reduction in the supply within 45 days of the occurrence. Within two years of suspension or significant reduction in the HRSD water supply, and with Department concurrence, an alternate water source shall be in-place to replace an equivalent average volume that had been supplied by the HRSD.
4. If the alternate water supply from the HRSD does not materialize within three years of the effective date of the permit, an alternate water source and supply amount accepted by the Department shall be in-place to support the facility.
5. Pump settings in individual wells are limited as follows:

<u>Owner Well Name (or #)</u>	<u>DEQ Well#</u>	<u>Max Pump Setting</u> (ft below land surface)
Well #1	150-00151	320

The permittee may provide additional information regarding the depth of the top of the Potomac Aquifer to justify pump settings different from those listed above. Any change in the pump settings must receive prior approval by Department staff and be included in this permit as a minor amendment.

6. Within 18 months of the effective date of the permit, the permittee shall construct a new production well (DEQ# 150-00188). Production from the new well (DEQ# 150-00188) is to begin within 21 months of the effective date of the permit and withdrawal from DEQ Well# 150-00151 is to cease. Following the construction of the new production well (DEQ# 150-00188) and before the abandonment of the existing site wells, an aquifer test shall be conducted on the new well with one or both of the existing wells used as monitoring wells for the test. The aquifer test shall be conducted following the Department's 2007 Aquifer Test Technical Advisory document and an Aquifer Test Plan is to be submitted for acceptance by Department staff prior to conducting the test.
7. At least two weeks prior to the scheduled construction of replacement Well #1A (DEQ Well # 150-00188), which is to be completed in the Potomac Aquifer, the permittee shall notify the Department of the drilling timetable and receive prior approval of the well location. Completed water well construction reports shall be submitted to DEQ within 30 days of the completion of any well and prior to the initiation of any withdrawal from the well. Additionally, geophysical logs (Spontaneous Potential, Single Point Resistance, 16/64 Short and Long Normal, Natural Gamma) shall be completed for the well and submitted with the corresponding completion report.

The permittee shall evaluate the geophysical logs and driller's logs from the new well location to estimate the top of the Potomac Aquifer, and therefore, a depth below which pumps may not be set. The permittee's determination of the top of the Potomac aquifer shall be submitted for review and Department concurrence prior to installation of any pump. All geophysical and geologist's logs shall be referenced by the DEQ well number.

8. Due to the extended gravel pack construction, within 3.5 years of the effective date of the permit, the permittee shall properly abandon both the production well, (DEQ# 150-00151) and the monitoring well (DEQ Well # 150-00150) in accordance with the Virginia Department of Health's Waterworks Regulations and submit documentation to the Department of Environmental Quality. In addition to routine abandonment activities, the production well pump intake is to be documented at the time of well abandonment. At least one week prior to permanently abandoning the well, the permittee shall notify the Department of Environmental Quality of the scheduled well abandonment date.
9. This permit may be reopened if the issuance of groundwater withdrawal permits required by the Ground Water Management Act of 1992 for existing permitted or certificated users indicates that the basis used for predicting compliance with regulatory drawdown criteria was inaccurate.

ATTACHMENT A

WATER CONSERVATION AND MANAGEMENT PLAN

ATTACHMENT B

MITIGATION PLAN



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarter 1 2 3 4

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Quarterly Groundwater Withdrawal Report

Name of Facility

Nestle Purina PetCare

Owner: **Nestle Purina PetCare**

Address **131 Tidy Cat Road**

King William, VA 23124

County **King William Co.**

Name of Operator _____

Position/Title _____

Signature _____ Date _____

Phone _____

Permit # **GW0003501**

Meter readings are in _____ (gallons, 100's or 1000's of gallons, cubic feet, etc.)

Month of _____ Year of _____

Owner Well Number	DEQ Well Number and MPID Number	Present Reading	Previous Reading	Total Gallons
Well #1	150-151 374302077071701			
Alternate Supply	HRSD Reclaimed Water Use			
Total Gallons (this month)				

Month of _____ Year of _____

Owner Well Number	DEQ Well Number and MPID Number	Present Reading	Previous Reading	Total Gallons
Well #1	150-151 374302077071701			
Alternate Supply	HRSD Reclaimed Water Use			
Total Gallons (this month)				

Month of _____ Year of _____

Owner Well Number	DEQ Well Number and MPID Number	Present Reading	Previous Reading	Total Gallons
Well #1	150-151 374302077071701			
Alternate Supply	HRSD Reclaimed Water Use			
Total Gallons (this month)				
Total Gallons (This Quarter)				

I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

NAME: _____ DATE: _____

SIGNATURE: _____

MITIGATION PLAN
DEQ GROUND WATER WITHDRAWAL PERMIT NO.GW0003501
Nestlé Purina PetCare
Golden Products Division
King William Co., Virginia

INTRODUCTION

On January 1, 1999, Nestlé Purina PetCare Company, Golden Products Division, was issued a Ground Water Withdrawal Permit by the Virginia Department of Environmental Quality (DEQ) to withdraw ground water. An application for permit renewal was submitted on July 3, 2008 (revised and resubmitted January 27, 2012). Ground water withdrawals associated with this permit will be utilized to supply process water to the industrial facility dedicated to the manufacturing of cat-box litter.

The purpose of this Mitigation Plan is to provide existing ground water users a method to resolve claims that may arise due to the impact of the withdrawal from the Nestlé Purina PetCare well field. Predicted drawdown of water levels due to the withdrawal from the Middle Potomac Aquifer, based on the DEQ modeling, are shown on the attached figure(s)."

Modeled impacts, as shown on the attached maps, extend beyond the boundary of the Nestlé Purina PetCare facility. Due to these findings, Nestlé Purina PetCare recognizes that there will be a rebuttable presumption that water level declines that cause adverse impacts to existing ground water users within the area of impact are due to this withdrawal. Claims may be made by ground water users outside this area, however, there is a rebuttable presumption that Nestlé Purina PetCare has not caused the adverse impact. Nestlé Purina PetCare proposes this plan to mitigate impacts to existing users and excludes impacts to wells constructed after the effective date of this permit.

CLAIMANT REQUIREMENTS

To initiate a claim, the claimant must provide written notification of the claim to the following address:

Plant Manager
Nestlé Purina PetCare
131 Tidy Cat Road
King William, VA 23086

The claim must include the following information: (a) a deed or other available evidence that the claimant is the owner of the well and the well was constructed and operated prior to the effective date of the permit; (b) all available information related to well construction, water levels, historic yield, water quality, and the exact location of the well sufficient to allow to locate the well on the claimant's property; (c) the reasons the claimant believes that the Nestlé Purina PetCare withdrawal has caused an adverse impact on the claimants well(s).

CLAIM RESOLUTION

Nestlé Purina PetCare will review any claim within **five (5) business days**. If Nestlé Purina PetCare determines that no rebuttal will be made and accepts the claim as valid, Nestlé Purina PetCare will so notify the claimant and will implement mitigation within **thirty (30) business days**. If the claim is not accepted as valid, Nestlé Purina PetCare will notify the claimant that (a) the claim is denied or (b) that additional documentation from the claimant is required in order to evaluate the claim. Within **fifteen (15) business days** of receiving additional documentation from the claimant, Nestlé Purina PetCare will notify the claimant (a) that Nestlé Purina PetCare agrees to mitigate adverse impacts or (b) the claim is denied. If the claim is denied, the claimant will be notified that the claimant may request the claim be evaluated by a three (3) member committee.

This committee will consist of one (1) representative selected by Nestlé Purina PetCare, one (1) representative selected by the claimant, and one (1) representative mutually agreed upon by the claimant and Nestlé Purina PetCare.

Any claimant requesting that a claim be evaluated by the committee should provide the name and address of their representative to Nestlé Purina PetCare. Within **five (5) business days** of receipt of such notification, Nestlé Purina PetCare will notify the claimant and claimant's representative of the identity of representative and instruct the representatives to select a third representative within **ten (10) business days**. Representatives should be a professional engineer or hydrogeologist with experience in the field of ground water hydrology. Nestlé Purina PetCare agrees to reimburse the members of the committee for reasonable time spent, at a rate prevailing in the area for experts in the above listed fields, and for direct costs incurred in administering the plan. The claimant may, at his or her option, choose to provide the reimbursement for the member of the committee selected by the claimant and up to half of the reimbursement for the mutual representative.

Within **ten (10) business days** of selection of the third representative, the committee will establish a **reasonable deadline** for submission of all documentation it needs to evaluate the claim. Both the claimant and Nestlé Purina PetCare will abide by this deadline.

Within **fifteen (15) business days** of receipt of documentation, the committee will evaluate the claim and reach a decision by majority vote. The committee will notify the claimant regarding its decision to (a) deny or (b) approve the claim. If the claim is approved, Nestlé Purina PetCare will mitigate the adverse impacts within **thirty (30) business days** of making the decision or as soon as practical. If the claim is denied by the committee, Nestlé Purina PetCare may seek reimbursement from the claimant for the claimant's committee representative and one half of the 3rd representative on the committee.

If a claimant within the indicated area of impact indicates that they are out of water, Nestlé Purina PetCare will accept the responsibility of providing water for human consumptive needs within **seventy-two (72) hours** and to cover the claim review period. Nestlé Purina PetCare reserves the right to recover the cost of such emergency supply if the claim is denied by Nestlé Purina PetCare or found to be fraudulent or frivolous. If Nestlé Purina PetCare denies a claim

and the claimant elects to proceed with the three (3) member committee, Nestlé Purina PetCare will continue the emergency water supply at the claimants request during the committee's deliberations, but reserves the right to recover the total costs of emergency water supply in the case that the committee upholds the denial of the claim. Similarly, Nestlé Purina PetCare reserves the right to recover costs associated with the claim process if a claim is found to be fraudulent or frivolous.

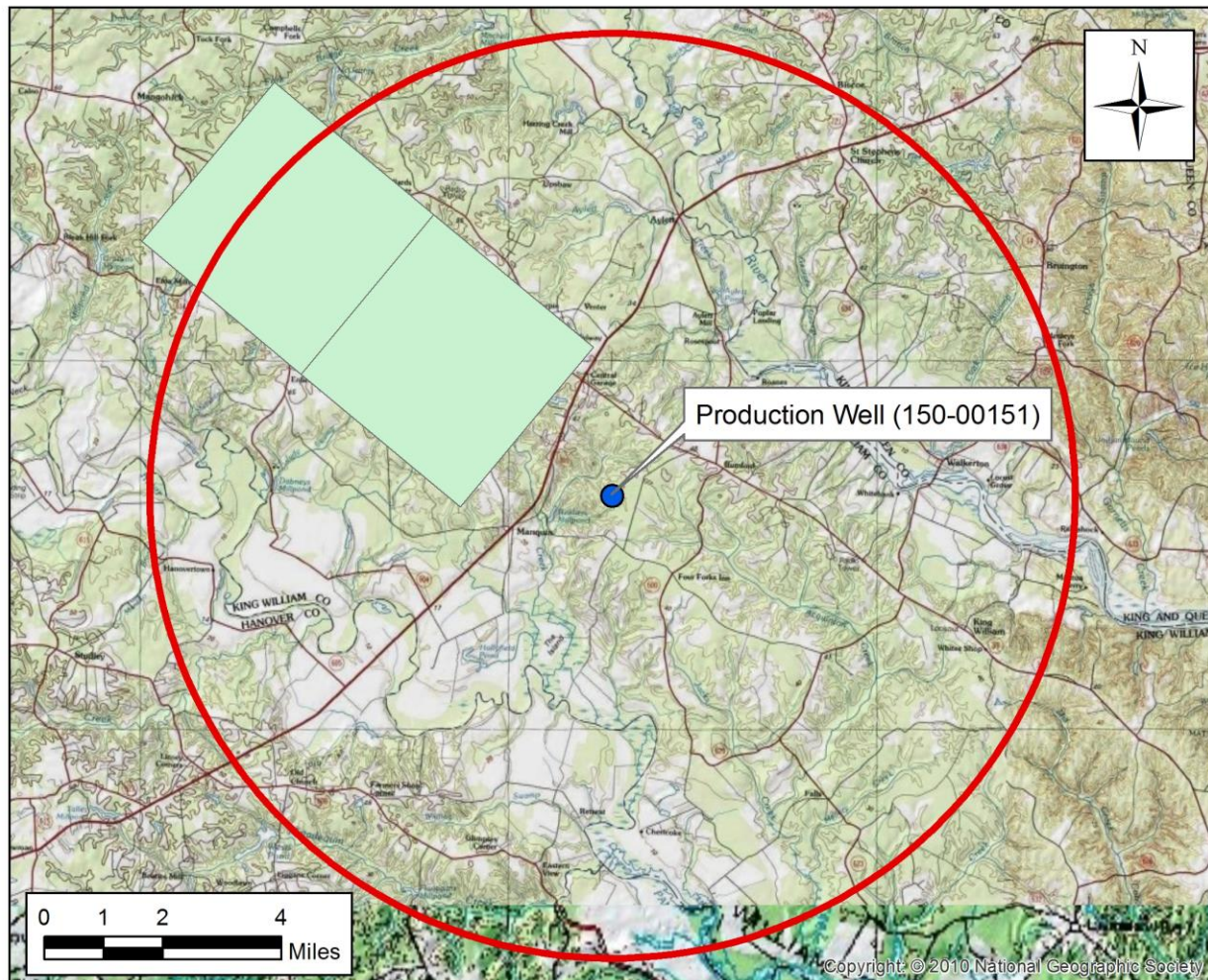
If it is determined by the committee or shown to the committee's satisfaction that a well operating under a mitigation plan similar to Nestlé Purina PetCare's Plan other than those owned and operated by Nestlé Purina PetCare has contributed to the claimed adverse impact, Nestlé Purina PetCare's share of the costs associated with mitigation will be allocated in proportion to its share of the impact. Such a determination shall be made by the committee after notification of the third party well owner, giving the third party well owner opportunity to participate in the proceedings of the committee.

PLAN ADMINISTRATION

Nothing in the Plan shall be construed to prevent the Department of Environmental Quality Staff from providing information needed for resolution of claims by the committee.

Nestle Purina PetCare

Area of Impact - Middle Potomac Aquifer



- Area of Impact
- Nestle Purina PetCare Wells
- Chickahominy-Piney Point Critical Cells

Simulated drawdown at or exceeding one foot in the Middle Potomac aquifer resulting from a 86,163 average gpd, steady-state withdrawal from the Middle Potomac aquifer. Maximum area of one-foot influence extends approximately 7.8 miles from the production well. The Virginia Coastal Plain Model developed in MODFLOW by the USGS was used to simulate drawdown.

Technical Evaluation performed by Aquaveo, LLC for the Virginia DEQ, Office of Surface and Ground Water Supply Planning March 21, 2013



**NESTLÉ PURINA PETCARE
GOLDEN PRODUCTS DIVISION
WATER CONSERVATION AND MANAGEMENT PLAN**

INTRODUCTION

The purpose of this Water Conservation and Management Plan (WCMP) is to create the framework for a formally adopted program for the Nestlé Purina PetCare Golden Products Division (NPPC) successful implementation of resource maximization. The WCMP goal is to minimize groundwater waste/misuse while ensuring peak system efficiency. This plan is submitted in accordance with Item 13 of the facility's Groundwater Withdrawal Permit Renewal Application.

DEFINITIONS

1. *Conservation* means the management of a natural resource thereby preventing loss or waste of the resource.
2. *Management* means the administration of this plan by directing conservation measures, addressing supply and demand, and maximizing peak system efficiency.
3. *Water reuse* means the treatment of wastewater and the application of the treated wastewater for some beneficial use.
4. *Management Staff* means the management of the Nestle Purina Pet Care Company, both at this facility and other corporate offices.
5. *Operations Staff* means the individual, non-management, employees of the Nestle Purina Pet Care King William County (Plant 877) facility.
6. *Water Saving Device* means a mechanical device designed to purposefully restrict the flow of water from a plumbing fixture.
7. *Non-Essential Water Usage* means the water is not directly essential for the minimum execution of the commercial/industrial process.

ORGANIZATION OF WCMP

The WCMP consists of modules addressing water savings, water loss reduction, water use education, water reuse, and emergency water use reduction. Each module is divided into (a) a plan which describes the theory and purpose of the module and (b) a program which identifies specific activities to be undertaken to meet the requirements of the module.

1.0 WATER SAVING

1.1 Water Saving Plan

The objective of the Water Saving Plan is to ensure that the NPPC facility is properly equipped to conserve water and that NPPC applies the best available water saving technology for water use and treatment. The successful administration of water saving measures will be coordinated with all the applicable requirements of King William County.

- A. The supply well and distribution system is dedicated to the fines conglomeration process used in the manufacture of cat litter. No pretreatment process will create wastewater.
- B. No water usage other than that directly applied to the manufacturing process will occur.
- C. When manufacturing process or equipment modifications are projected, NPPC will include reduction in water use as a factor.

1.2 Water Saving Program

Where water saving fixtures or devices are utilized, they must conform with the Uniform Statewide Building Code.

- A. *Showers*. No showers shall be connected to this water source.
- B. *Toilets*. No toilets shall be connected to this water source.
- C. *Sinks*. No sinks shall be connected to this water source.
- D. *Outdoor Faucets*. No outdoor faucets shall be connected to this water source.
- E. *Pin Mixers*. The manufacturing involves the mixing of clay seed with water in pin mixers under a proprietary process. The moisture content of the wet seed can be controlled through use of moisture content meters.

In 2012, Nestlé (the parent company) and NPPC apply a water reduction objective of 1.8% per tonne of product manufactured to all manufacturing facilities. An ongoing ISO 14001 based performance auditing program is used to monitor this goal.

2.0 WATER LOSS REDUCTION

2.1 Water Loss Reduction Plan

The objective of the Water Loss Reduction Plan is to enforce a standard operating procedure which employs technological abilities to maximize the system's efficiency. This plan is a comprehensive effort including water use accounting, system maintenance, and operator training. The plan includes, but is not limited to, the following:

- A. Water use accounting is the timely auditing of water for the benefit of addressing system efficiencies and areas in need of attention. The following provides the basis of information for water use accounting.
 - 1. Quarterly water use reports, and comparison to prior history to identify discrepancies in excess of 10% that cannot be attributed to increased production.
 - 2. The manufacturing process creates minimal wastewater. Wastewater is emitted to the atmosphere in the form of steam. The metering of wastewater treatment system inflows is not therefore applicable to water use accounting for this plant.
- B. Maintenance and the accurate recording of maintenance actions provide the ability to ensure improvements are planned and undertaken, thereby maximizing system efficiency. Two items are particularly important for reducing water loss.
 - 1. The proper maintenance of all metering devices is necessary for preparation of an accurate water balance.
 - 2. The prompt repair of system faults (e.g., leaks) which allow water loss is necessary for preventing substantial loss.
- C. NPPC shall identify leaks and repair system faults in order to maintain optimum system efficiency. An active leak detection program integrates the benefits of an accurate water balance, maintenance records, operator knowledge, and a system distribution evaluation. NPPC has initiated a leak detection program at the facility, including:
 - 1. Operator training in distribution inspection procedures including investigation of possible water losses.
 - 2. Periodic inspections to identify leaks in the distribution system. The distribution system is fully above ground.
 - 3. Contract licensed plumbers or other professionals as needed to repair system leaks.

- D. To become fully educated in water loss preparedness, NPPC will actively seek the assistance of the Virginia Department of Environmental Quality (VDEQ), the Virginia Department of Health (VDH), the American Waterworks Association (AWWA), and the Virginia Rural Water Association (VRWA).

2.2 Water Loss Reduction Program

Water loss reduction pertains to those areas of the facility where the waste of water is reduced by immediately attending to minor and major leaks, maintaining observation of the manufacturing process to prevent excessive water use, maintaining a good preventive and corrective maintenance program, and minimization/elimination of other uses.

A. Water Distribution and System Leaks

1. NPPC facility will periodically inspect and compare daily water use from the main water meter to (a) maintain records on water use, and (b) enable observation of high use days.

High use is defined as exceeding the normal production level by 10% or more.

2. High use will be investigated immediately.
3. Water distribution and system leaks will be attended to and repaired immediately.

B. Preventive and Corrective Maintenance.

1. Regulate the water flow to the manufacturing process equipment to prevent excessive flow, but not to the point that the well pump can not withdraw sufficient water for the process.
2. Maintain an inventory of emergency repair equipment and spare parts to allow quick repairs.
3. Consistently observe wet areas on floors and grounds. If excessive, investigate immediately and repair if necessary.

C. Fines Conglomeration System

1. NPPC and the fines conglomeration system manufacturer provide guidance as to the correct mixtures of raw materials to maintain the preparation of finished product. Follow these directions and keep water mixtures to a minimum.

D. General Cleaning and Other Uses

All general cleaning and other requirements (e.g., dust control) are to utilize water sources separate from NPPC's water system (e.g., sanitary water provided by King William County, surface withdrawal, or impoundment). However, in the event that this is not feasible under normal or emergency conditions, the following guidelines will be followed:

1. There will be no vehicle washing; equipment washing; washing down of sidewalks, loading docks, or platforms; agricultural uses; or food preparation use allowed.
2. As a normal policy, hoses shall not be kept flowing for the duration of the cleaning process. Sprayers or automatic cutoff devices will be used on the end of hoses to prevent constant water flow.
3. As a normal policy, washers shall be maintained at all connection points on hoses to prevent unnecessary leaking. A supply of hoses and washers shall be maintained, and leaking hoses and hose connections shall be repaired or replaced.
4. All hoses shall be removed from all fixtures immediately after use.

3.0 WATER USE EDUCATION

3.1 Water Use Education Plan

The objective of the Water Use Education Program is to train personnel on prudent water use, reducing water waste, and conservation.

3.2 Water Use Education Program

A. Assignment of Duties

The Plant Engineer, or designated staff member reporting to the Plant Engineer, will be assigned the duties of water use conservation including continual education of water conservation methods and practices.

B. Duties and Responsibilities

NPPC personnel will develop and maintain an education program to assure continual water conservation based on, but not limited to, the following criteria:

1. Keep abreast of water conservation methods and practices by identifying applicable water conservation guidance obtained from VDEQ, VDH, AWWA, and ARNW guidance manuals.
2. Relay this information to the system users via newsletters, memorandums, in-house seminars, or other methods consistent with the operational practices of NPPC.
3. Routinely monitor the water system and report any and all misuse of water to the Plant Management with recommendations to prevent future misuse. During this audit and reporting, NPPC personnel will apply any new ideas of water conservation methods and practices.

4.0 WATER REUSE

4.1 Water Reuse Plan

The objective of the Water Reuse Plan is for NPPC to encourage water reuse should such an opportunity arise. Water reuse is not currently feasible under the manufacturing processes used; however, NPPC will actively evaluate the potential for water reuse as developments in technology occur.

4.2 Water Reuse Program

Water reuse methods will be investigated and applied in those areas where the manufacturing process and the health and safety of the employees are not jeopardized and where feasible. The dedicated use of the water supply applies limits in its capabilities for reuse; however, as improvements in manufacturing technology develop, they will be evaluated by Management Staff as available with this goal in mind.

4.2.1 Recovery of Stack Exhaust Steam

NPPC has evaluated the capture and reuse of exhaust steam at the facility. It has been determined that the steam created by the pin mixer operation is too acidic for reuse (specifically, product integrity would be compromised).

4.2.2 Recovery of Mine Pit Dewatering Water

The facility currently receives some raw material (clay) from the adjacent mine that is operated by NPPC. The pit is dewatered, and the discharge is released to a permitted outfall. The amount of dewatering water from the pit varies seasonally and can be minimal to non-existent during summer months. This is because most of the pit water is attributable to storm water capture with minimal groundwater seepage. The mine also already dedicates a significant quantity of this water for dust suppression on the haul roads and parking lots.

Depending on seasonal conditions, mine pit water could be collected in a pond or tank, treated, and used to augment the water supply needed to operate the engineered litter system. This possibility would require a modification to the mine's reclamation permit to construct a storage pond, and cost/benefit analysis regarding the construction costs, equipment, and water treatment that would be needed. Based on the limited supply, this option does not appear suitable.

4.2.3 Recovery of Roof/Parking Lot Storm Water Runoff

The NPPC King William facility has a total roof area of 272,025 ft². In a typical year (43.9 inches rainfall), a 272,025 ft² roof will shed 7,448,085 gallons of water. Storm water from roof and parking areas is currently captured in four existing sediment basins. The collection of roof runoff segregated from parking lot runoff (as opposed to being commingled in the existing sediment basins) would require the retrofitting of the facility. Roof runoff could be collected in

above ground tank(s) or into a designated lined basin. Tanks have the advantage of minimizing evaporation and introduction of contaminants. However, in order to capture a significant storm (5 inch rainfall), storage capacity of over 850,000 gallons would be required. A lined basin can be sized to collect all storm water, however, water loss due to evaporation and potential introduction of contaminants would be factors.

The option of collecting roof runoff will not be used because the option discussed in Section 4.2.4 is deemed superior.

4.2.4 Hampton Roads Sanitation District

The Hampton Roads Sanitation District (HRSD) operates the King William Treatment Plant (KWTP), a wastewater treatment plant approximately two miles from the NPPC facility. During a September 4, 2012, meeting between representatives of NPPC, HRSD, King William County, Fountainbleau Farms, and the DEQ, an tentative verbal agreement was achieved that HRSD will supply NPPC with reclaimed water. This arrangement's suitability hinges upon the positive evaluation of water samples submitted by HRSD to NPPC. Initially, the amount of reclaimed water will be 30,000 gallons per day (gpd), which represents the total daily effluent of the KWTP. This amount may increase over time as KWTP processes more wastewater from increased development in the area.

The NPPC manufacturing facility currently has the capacity to reuse and process all of HRSD's total daily effluent discharge quantity. Although water use is based on manufacturing process rates, the estimated process water usage is expected to increase over time as has been provided in the permit application.

Within three years of the effective date of this permit, NPPC will have completed an economical and feasible Agreement with HRSD to minimize discharges from the HRSD and to maximize the sustainability of groundwater withdrawal from NPPC's production well. Water storage capabilities and water treatment processes will be identified in a mutually agreed document between both parties. Progress reports of NPPC and HRSD discussions and agreements will be provided to the Department semi-annually.

5.0 EMERGENCY WATER USE REDUCTION

5.1 Emergency Water Use Reduction Plan

The objective of the Water Use Reduction Plan is to influence water use behavior through mandatory action. NPPC will require water use reductions when:

1. Nestle Purina Pet Care is advised of a water shortage emergency by the VDEQ's Director or his/her authorized agents.
2. King William County determines the existence of a water shortage emergency.

5.2 Emergency Water Use Reduction Program

The use of reclaimed water from the KWTP as a supplement to the production water supply at NPPC is intended to eliminate the existing KWTP discharge outfall to Moncuin Creek. Accordingly, it is appropriate that NPPC utilize the reclaimed water supply fully even in the event of declared water shortage emergency.

NPPC will endeavor to investigate reducing groundwater use during declared water shortage emergencies by means of temporary supplementation of the water supply using storm water contained in existing sediment basins #1 and #3. This is anticipated to involve significant water quality issues and expenditures which, if NPPC is not able to surmount using field equipment, may negate this program.